Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-32

Sample Date: 8/30/21

Concrete Grade: DM

Dates Test Represents: 8/31/2021 through 9/6/2021

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1600	9.79	2.62	55.1
26A	71-47	Presque Isle	155	0.95	2.62	5.3
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6
		Total Wt	2905	17.69		100.0

<----- Verify this number is 100%

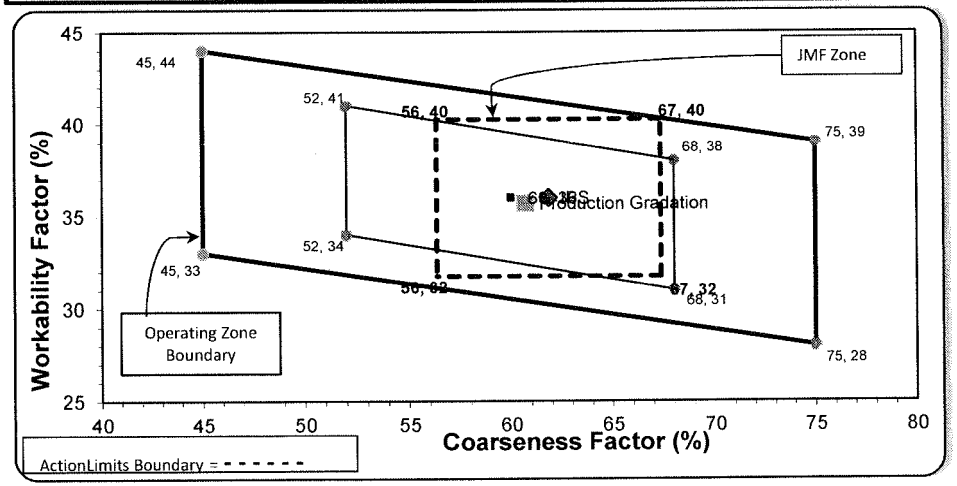
Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	96.9	100.0	100.0	98.3	1.7	1.7
3/4"	85.4	100.0	100.0	92.0	6.3	8.0
1/2"	49.5	97.5	100.0	72.1	19.9	27.9
3/8"	27.6	87.2	100.0	59.4	12.6	40.6
#4	6.0	23.8	95.4	42.3	17.1	57.7
#8	3.0	6.5	78.8	33.2	9.1	66.8
#16	2.5	3.0	60.4	25.4	7.7	74.6
#30	2.3	2.5	43.5	18.6	6.8	81.4
#50	2.2	2.3	26.1	11.7	7.0	88.3
#100	2.1	2.0	9.8	5.1	6.5	94.9
LBW	1.5	1.6	1.3	1.4	3.7	98.6

*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 8% for the 1" sieve when a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation ◉ Batch Plant Gradations ○ Aggregate Supplier Gradations

Coarseness Factor:	61	Workability Factor:	33	Adjusted WF	35.7



Intial Production Sample (IPS)

Coarseness Factor:	62
Workability Factor:	36

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	100.0	0.0	0.0
3/4"	95.0	5.0	5.0
1/2"	72.3	22.8	27.7
3/8"	60.4	11.8	39.6
#4	42.6	17.8	57.4
#8	36.0	6.6	64.0
#16	29.5	6.5	70.5
#30	20.3	9.2	79.7
#50	9.5	10.8	90.5
#100	3.4	6.1	96.6
LBW	1.3	2.1	98.7

PREPARED BY:
SM, LLC Technical Service

Approved By:

Edw. C. Levy Co.

JMT
8911 W. Jefferson
Detroit, 48209
(313) 429-2429

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Period: 08/29/2021 - 09/04/2021

Name/Title Doug Storey / QC Technician

Report Date 09/03/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	95.4	%	95-100
	#8 (2.36mm)	78.8	%	65-95
	#16 (1.18mm)	60.4	%	35-75
	#30 (.6mm)	43.5	%	20-55
	#50 (.3mm)	26.1	%	10-30
	#100 (.15mm)	9.8	%	0-10
	#200 (75µm)	1.7	%	
	FM	2.86		2.6-3
	Wash Loss (#200/75um)	1.3	%	0-3
	Total Moisture	4.6	%	

Edw. C. Levy Co.

JMT
8911 W. Jefferson
Detroit, 48209
(313) 429-2429

Plant 958-JMT

Product 1067-26A Mod LS

Period: 08/29/2021 - 09/04/2021

Name/Title Doug Storey / QC Technician

Report Date 09/03/2021

Procedure	Sieve/Test	Result	Unit	26A Mod LS Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	100.0	%	100-100
	1/2" (12.5mm)	97.5	%	95-100
	3/8" (9.5mm)	87.2	%	60-95
	#4 (4.75mm)	23.8	%	5-30
	#8 (2.36mm)	6.5	%	0-12
	#16 (1.18mm)	3.0	%	
	#30 (.6mm)	2.5	%	
	#50 (.3mm)	2.3	%	
	#100 (.15mm)	2.0	%	
	#200 (75µm)	1.8	%	
	Wash Loss (#200/75um)	1.6	%	0-3
	Total Moisture	4.0	%	

Edw. C. Levy Co.

JMT
8911 W. Jefferson
Detroit, 48209
(313) 429-2429

Plant 958-JMT

Product 1054-6AA LS PI

Period: 08/29/2021 - 09/04/2021

Name/Title Doug Storey / QC Technician

Report Date 09/03/2021

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	96.9	%	95-100
	3/4" (19mm)	85.4	%	
	1/2" (12.5mm)	49.5	%	30-60
	3/8" (9.5mm)	27.6	%	
	#4 (4.75mm)	6.0	%	0-8
	#8 (2.36mm)	3.0	%	
	#16 (1.18mm)	2.5	%	
	#30 (.6mm)	2.3	%	
	#50 (.3mm)	2.2	%	
	#100 (.15mm)	2.1	%	
	#200 (75µm)	1.7	%	
	Wash Loss (#200/75um)	1.5	%	0-2
	Total Moisture	3.3	%	